Flight-Testing Newton's Laws			
2002 Science and Technology			
Academic Standards			
Pennsylvania Science and Technology			
Grade 10			
Activity/Lesson	State	Standards	
Session-10 (1-5)	PA	SCT.10.3.1.10.E.1	Describe how fundamental science and technology concepts are used to solve practical problems (e.g., momentum, Newton's laws of universal gravitation, tectonics, conservation of mass and energy, cell theory, theory of evolution, atomic theory, theory of relativity, Pasteur's germ theory, relativity, heliocentric theory, gas laws, feedback systems).
Session-10 (1-5)	PA	SCT.10.3.4.10.C.7	Know Newton's laws of motion (including inertia, action and reaction) and gravity and apply them to solve problems related to forces and mass.
Session-1 (1-17)	PA	SCT.10.3.1.10.E.1	Describe how fundamental science and technology concepts are used to solve practical problems (e.g., momentum, Newton's laws of universal gravitation, tectonics, conservation of mass and energy, cell theory, theory of evolution, atomic theory, theory of relativity, Pasteur's germ theory, relativity, heliocentric theory, gas laws, feedback systems).
Session-1 (1-17)	PA	SCT.10.3.4.10.C.7	Know Newton's laws of motion (including inertia, action and reaction) and gravity and apply them to solve problems related to forces and mass.
Session-2 (1-10)	PA	SCT.10.3.1.10.E.1	Describe how fundamental science and technology concepts are used to solve practical problems (e.g., momentum, Newton's laws of universal gravitation, tectonics, conservation of mass and energy, cell theory, theory of evolution, atomic theory, theory of relativity, Pasteur's germ theory, relativity, heliocentric theory, gas laws, feedback systems).
Session-2 (1-10)	PA	SCT.10.3.4.10.C.7	Know Newton's laws of motion (including inertia, action and reaction) and gravity and apply them to solve problems related to forces and mass.
Session-3 (1-6)	PA	SCT.10.3.1.10.E.1	Describe how fundamental science and technology concepts are used to solve practical problems (e.g., momentum, Newton's laws of universal gravitation, tectonics, conservation of mass and energy, cell theory, theory of evolution, atomic theory, theory of relativity, Pasteur's germ theory, relativity, heliocentric theory, gas laws, feedback systems).

Session-3 (1-6)	PA	SCT.10.3.4.10.C.7	Know Newton's laws of motion (including inertia, action and reaction) and gravity and apply them to solve problems related to forces and mass.
Session-5 (1-6)	PA	SCT.10.3.1.10.E.1	Describe how fundamental science and technology concepts are used to solve practical problems (e.g., momentum, Newton's laws of universal gravitation, tectonics, conservation of mass and energy, cell theory, theory of evolution, atomic theory, theory of relativity, Pasteur's germ theory, relativity, heliocentric theory, gas laws, feedback systems).
Session-5 (1-6)	PA	SCT.10.3.4.10.C.7	Know Newton's laws of motion (including inertia, action and reaction) and gravity and apply them to solve problems related to forces and mass.
Session-6 (1-8)	PA	SCT.10.3.1.10.E.1	Describe how fundamental science and technology concepts are used to solve practical problems (e.g., momentum, Newton's laws of universal gravitation, tectonics, conservation of mass and energy, cell theory, theory of evolution, atomic theory, theory of relativity, Pasteur's germ theory, relativity, heliocentric theory, gas laws, feedback systems).
Session-6 (1-8)	PA	SCT.10.3.4.10.C.7	Know Newton's laws of motion (including inertia, action and reaction) and gravity and apply them to solve problems related to forces and mass.
Session-7 (1-5)	PA	SCT.10.3.1.10.E.1	Describe how fundamental science and technology concepts are used to solve practical problems (e.g., momentum, Newton's laws of universal gravitation, tectonics, conservation of mass and energy, cell theory, theory of evolution, atomic theory, theory of relativity, Pasteur's germ theory, relativity, heliocentric theory, gas laws, feedback systems).
Session-7 (1-5)	PA	SCT.10.3.4.10.C.7	Know Newton's laws of motion (including inertia, action and reaction) and gravity and apply them to solve problems related to forces and mass.
Session-8 (1-9)	PA	SCT.10.3.1.10.E.1	Describe how fundamental science and technology concepts are used to solve practical problems (e.g., momentum, Newton's laws of universal gravitation, tectonics, conservation of mass and energy, cell theory, theory of evolution, atomic theory, theory of relativity, Pasteur's germ theory, relativity, heliocentric theory, gas laws, feedback systems).
Session-8 (1-9)	PA	SCT.10.3.4.10.C.7	Know Newton's laws of motion (including inertia, action and reaction) and gravity and apply them to solve problems related to forces and mass.

Activity/Lesson	State	Standards	
Session-9 (1-7)	PA	SCT.10.3.1.10.E.1	Describe how fundamental science and technology concepts are used to solve practical problems (e.g., momentum, Newton's laws of universal gravitation, tectonics, conservation of mass and energy, cell theory, theory of evolution, atomic theory, theory of relativity, Pasteur's germ theory, relativity, heliocentric theory, gas laws, feedback systems).
Session-9 (1-7)	PA	SCT.10.3.4.10.C.7	Know Newton's laws of motion (including inertia, action and reaction) and gravity and apply them to solve problems related to forces and mass.
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Pennsylvania Science and Technology			
Grade 12			
Activity/Lesson	**State**	**Standards**	
Session-10 (1-5)	PA	SCT.12.3.4.12.C.3	Analyze the principles of translational motion, velocity and acceleration as they relate to free fall and projectile motion.
Session-10 (1-5)	PA	SCT.12.3.4.12.C.5	Interpret a model that illustrates circular motion and acceleration.
Session-1 (1-17)	PA	SCT.12.3.4.12.C.3	Analyze the principles of translational motion, velocity and acceleration as they relate to free fall and projectile motion.
Session-1 (1-17)	PA	SCT.12.3.4.12.C.5	Interpret a model that illustrates circular motion and acceleration.
Session-1 (1-17)	PA	SCT.12.3.4.12.C.6	Describe inertia, motion, equilibrium, and action/reaction concepts through words, models and mathematical symbols.
Session-3 (1-6)	PA	SCT.12.3.4.12.C.3	Analyze the principles of translational motion, velocity and acceleration as they relate to free fall and projectile motion.
Session-5 (1-6)	PA	SCT.12.3.4.12.C.3	Analyze the principles of translational motion, velocity and acceleration as they relate to free fall and projectile motion.
Session-6 (1-8)	PA	SCT.12.3.4.12.C.3	Analyze the principles of translational motion, velocity and acceleration as they relate to free fall and projectile motion.
Session-6 (1-8)	PA	SCT.12.3.4.12.C.5	Interpret a model that illustrates circular motion and acceleration.
Session-7 (1-5)	PA	SCT.12.3.4.12.C.3	Analyze the principles of translational motion, velocity and acceleration as they relate to free fall and projectile motion.
Session-8 (1-9)	PA	SCT.12.3.4.12.C.3	Analyze the principles of translational motion, velocity and acceleration as they relate to free fall and projectile motion.
Session-9 (1-7)	PA	SCT.12.3.4.12.C.3	Analyze the principles of translational motion, velocity and acceleration as they relate to free fall and projectile motion.